

You will need to obtain the signature of your instructor or TA on the following items in order to receive credit for your lab assignment. Signatures are due by **Friday, September 26, 2014 (Required Elements)** and **Wednesday, October 1, 2014 (Supplemental Elements)**.

Print your name below, sign the honor code pledge, circle your course number, and then demonstrate your working hardware & firmware in order to obtain the necessary signatures.

Student Name: Ali Ismail

Honor Code Pledge: "On my honor, as a University of Colorado student, I have neither given nor received unauthorized assistance on this work. I have clearly acknowledged work that is not my own."

Student Signature: Ali Ismail

Signoff Checklist

Required Elements

- ☒ Schematic of acceptable quality, correct memory map, SPLD .PLD file
- ☒ Pins and signals labeled, decoupling capacitors, and two 28-pin wire wrap sockets present on board
- ☒ NVRAM (as EPROM substitute), decode logic, and LED functional
- ☒ Understands device programmer.
- ☒ Demonstrated ability to use logic analyzer to capture bus cycles and view fetches from NVRAM. Shows detailed knowledge of both state and timing modes. Captures latched address lines A[15:0], data lines D[7:0], ALE, /PSEN, and NVRAM chip select signal on the logic analyzer display.
- ☒ Shows and discusses logic analyzer screen captures:
- ☒ Assembly program and timer ISR functional:

TA signature and date

09/25/14

Supplemental Elements (Qualifies ECEN 5613 students for higher grade.)

- ☒ 74LS374 debug port functional
- ☐ Understands timing analysis, setup/hold/propagation

TA signature and date

9/27/2014

Instructor/TA Comments:

☐ ☐ ☐

FOR INSTRUCTOR USE ONLY

Required Elements

	Not Applicable	Poor/Not Complete	Meets Requirements	Exceeds Requirements	Outstanding
Schematics, SPLD code	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hardware physical implementation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Required Elements functionality	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sign-off done without excessive retries	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Student understanding and skills	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overall Demo Quality (Required Elements)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

FOR INSTRUCTOR USE ONLY

Supplemental Elements

	Not Applicable	Poor/Not Complete	Meets Requirements	Exceeds Requirements	Outstanding
Schematics, SPLD code	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Hardware physical implementation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Supplemental Elements functionality	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Sign-off done without excessive retries	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Student understanding and skills	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Overall Demo Quality (Supplemental)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Schematics - Update Document info & no sheet

NOTE: This signoff sheet should be the top/first sheet of your submission.

→ SOS implementation

→ Include propagation delay in submission